

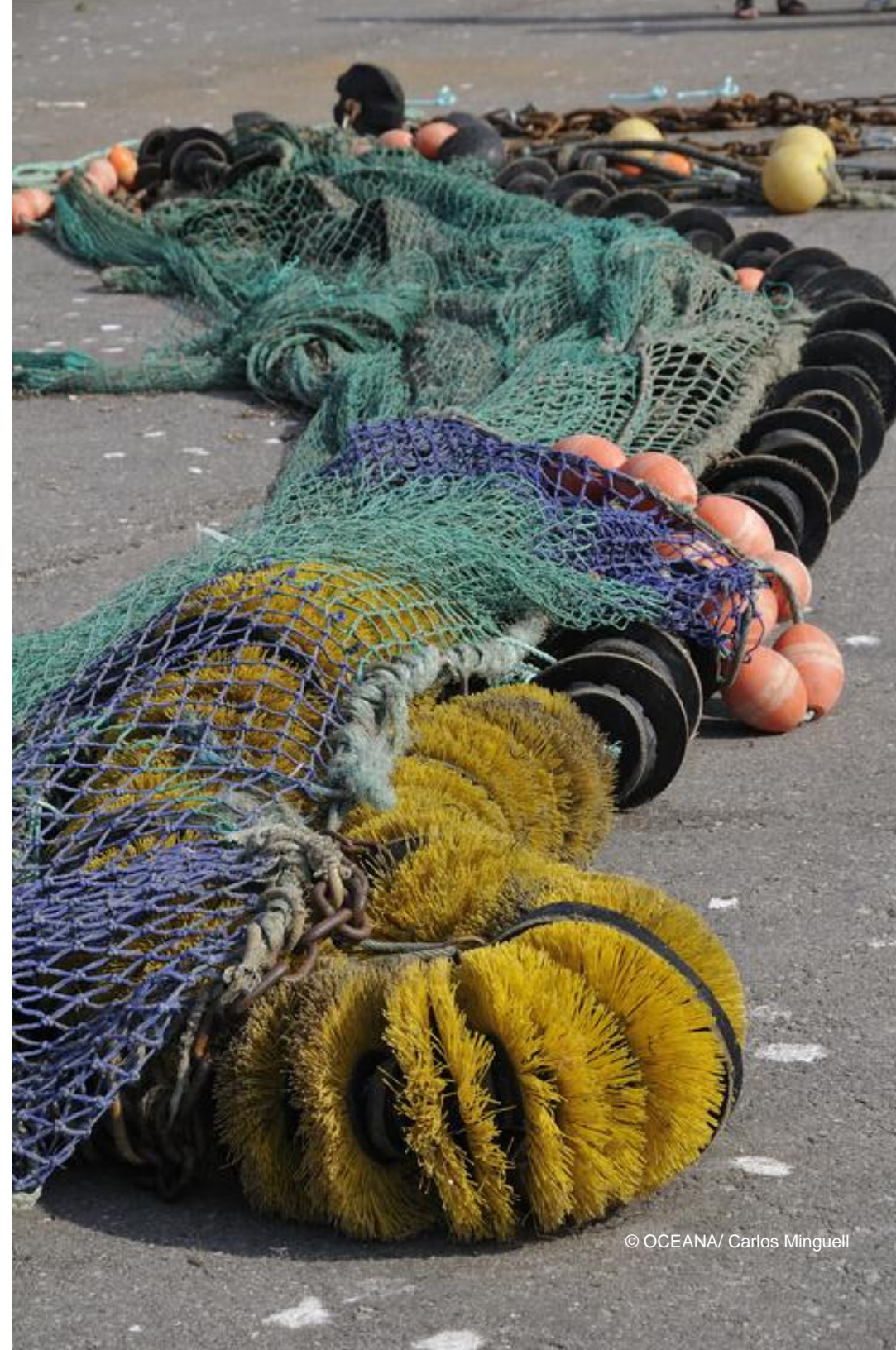
Oceana recommendations on fishing opportunities for 2015

Baltic Sea Stocks



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Introduction

In advance of the next EU Commission proposal and Council decision on fishing opportunities in the Baltic Sea, Oceana would like to provide a constructive opinion on how total allowable catches (TACs) should be fixed for 2015. It is our hope that the EU Commission and EU Member States take into account the recommendations contained in this document and establish TAC levels that are in line with scientific advice, thereby balancing conservation and exploitation objectives.

This year, the decision on TACs for the Baltic Sea as well as for the rest of the EU waters will define the willingness for Ministers to implement what they have agreed on, as Maximum Sustainable Yield (MSY) is to be achieved as of 2015 according to the new Common Fisheries Policy (CFP).

The International Council for the Exploration of the Seas (ICES) has been presenting advice on how to transition to MSY by 2015 for several years now. Unfortunately, the Ministers have decided to only follow this advice for some stocks, leaving Member States with little choice this year but to apply in some cases rather large cuts for overfished stocks.

2015 is also the year when the landing obligation comes into force for several species in the Baltic Sea which will be reflected in the TAC setting as we will move from landing to catch limits. Oceana urges the Commission and decision makers to ensure that this leads to a general decrease in fishing mortality, by applying caution when adding current unwanted and discarded catches to the TACs.



Hanna Paulomäki, Baltic Sea project manager

State of resources

Although fisheries resources in the Baltic Sea have improved in recent years, currently 5 out of 11 stocks are exploited above MSY and a couple of the stocks managed with TACs are classified as data-limited. Some commercial stocks in the Baltic Sea lack proper management, such as TAC or effort control, including for example most of the flatfish stocks as well as sea trout.

This year's ICES advice has proven to be particularly problematic as the assessment for the eastern Baltic cod stock could not be accepted by its scientific experts, leaving the stock classified as data-limited. Both cod stocks are unfortunately in bad condition; the western stock is being harvested at a level far above MSY and the eastern stock is dominated by small and thin individuals.

Recovering stocks to levels over MSY is essential to economic efficiency, as restoring stock productivity and ecosystem health will result in better revenues for fishers and will improve the welfare of fishing communities.

The new Common Fisheries Policy (CFP) states that "the maximum sustainable yield exploitation rate shall be achieved by 2015 where possible and on a progressive, incremental basis at the latest by 2020 for all stocks". Reaching MSY by 2015 when possible should no longer be considered as an option but as an obligation for all those stocks where science has demonstrated that under the adequate measures, the target can be achieved. MSY should therefore be reached for all stocks without delay.

Oceana sees MSY management as a first step in the right direction for the management of European fisheries. However in the long term, fisheries management should go beyond MSY to ensure the environmental and economic sustainable exploitation of marine resources. In the CFP, the MSY objective should therefore be seen as an upper limit for exploitation rather than a target.

Data-poor stocks

Currently around 47% of stocks subject to catch limits in the EU are not fully assessed, which means that implemented TACs can neither guarantee sustainable exploitation, nor can they guarantee reaching MSY. In the Baltic Sea, this is the case for the eastern cod stock, two stocks of plaice as well as herring in the Bothnian Bay. To remedy this situation the Commission has promoted the use of alternative assessment methods appropriate for data limited stocks to provide quantitative catch recommendations. In its communication for 2015 fishing opportunities the Commission states that “in cases where no scientific advice is available, the precautionary approach in line with Article 2(2) of the CFP should be followed in a systematic, predefined and transparent way”. Article 2(2) of the CFP basic regulation outlines the MSY objective.

Oceana expects that the Council will follow the ICES approach for data limited stocks when setting 2015 catch limits. In this way the precautionary approach will be applied and Member States will be encouraged to provide accurate information on fisheries to develop sound assessments. Oceana is worried about the fact that the amount of data-limited stocks has increased from last year.

Management plans

Oceana supports the Commission’s intention to move from single-stock/species management plans towards multi-species management plans. This new type of multiannual plans (MAP) should not only focus on the target species but should also ensure that wider effects on the ecosystem be taken into consideration by integrating specific measures to minimize unwanted catches by using a best available technology approach, minimizing fishing impacts on marine habitats, ensuring an appropriate size, age and geographical distribution of fish stocks as well as protecting essential fish habitats. In this manner, they should also contribute to achieving the objective

under the Marine Strategy Framework Directive¹ to restore or maintain the good environmental status of marine waters by 2020.

Unfortunately, several MAPs, including the much needed Baltic salmon MAP have been blocked in inter-institutional limbo. A task force was established to resolve this inter-institutional deadlock which recently delivered its report and the Commission is expected to table proposals based on the recommendations in the report as soon as possible.

A multi-species plan for the Baltic Sea is currently under discussion in the European Union, and is aimed at developing joint management measures for cod, herring and sprat. A proposal from the Commission is expected this autumn. Oceana expects the proposal to ensure long term environmental sustainability and contribution to the fulfillment of the MSFD, specifically by including targets for MSY biomass and healthy size and age distribution.

Oceana’s principles for proposing TACs for 2015

The Commission has proposed the following principles to set fishing opportunities for 2015:

1. The catch levels will be based on the best available scientific advice from the International Council for the Exploration of the Sea (ICES) and the Scientific, Technical and Economic Committee for Fisheries (STECF) on achieving MSY.
2. Only if achieving MSY by 2015 would seriously jeopardise the social and economic sustainability of the fishing fleets involved would a delay in reaching the objective beyond 2015 (and no later than 2020) be acceptable.
3. Where multiannual plans exist and are consistent with MSY, the Commission will continue to apply them. Where the existing plans have become inapplicable (e.g. because an objective other than MSY has been decided), the

¹ Directive 2008/56/EC. Marine Strategy Framework Directive.

Commission will adopt proposals for fishing opportunities on the basis of MSY.

4. In cases where scientific information is insufficient to determine MSY levels, approximate parameters should be considered and several situations have been identified. In all cases, the Commission intends to make proposals based on scientific advice and without jeopardizing the conservation needs of these stocks.

Oceana supports these guidelines and emphasises the urgent need to follow the ICES MSY framework, as a commitment to reduce overfishing and as an intermediate step towards rebuilding fish stocks to their most productive levels.

Oceana further encourages the Commission and Member States to incorporate more species into the Baltic Sea TAC regime, starting with those for which ICES has already provided scientific advice on stock status and recommended catch limits.

Finally, Oceana considers that the allocation of fishing opportunities should give priority to fishermen who apply the most environmentally sound practices, thus rewarding fishing methods that are the most selective and least destructive to the environment, as spelled out in article 17 in the Basic Regulation of the reformed CFP.

Oceana TAC proposal (in tonnes, except for salmon which is expressed as number of individuals) for Baltic Sea stocks. Brackets compare TAC difference in % from previous year

Species	Fishing area	TAC 2014	Stock Status	Oceana proposal 2015
<i>Gadus morhua</i>	22-24	17 000 (-15%)	Below MSY Btrigger	8793 (-48%)
<i>Gadus morhua</i>	25-32	70 300 (-7%)	Unknown	29 085 (-59%)*
<i>Clupea herrungus</i>	22 – 24	19 800 (-23%)	Above MSY Btrigger	21 994 (11%)
<i>Clupea herrungus</i>	25-29 and 32	113 000 (25%)	Above MSY Btrigger	185 520* (N/A) No fishing in area 25-26
<i>Clupea herrungus</i>	28.1	30 700 (0%)	Above MSY Btrigger (F>Fmsy)	38 780 (26%)
<i>Clupea herrungus</i>	30-31	138 000 (30%)	Above MSY Btrigger (30), unknown (31)	186 534 (35%)
<i>Sprattus sprattus</i>	22-32	240 000 (-4%)	Above MSY Btrigger	222 000* (-10%) No fishing in area 25-26
<i>Pleuronectes platessa</i>	21-23	N/A	Unknown but increasing (data poor stock)	2626**
<i>Pleuronectes platessa</i>	24-32	N/A	Unknown but increasing (data poor stock)	886**
<i>Salmo salar</i>	22-31	109 000 (-11%)	N/A	79 000 (-27%)*
<i>Salmo salar</i>	32	15 000	N/A	0 (-100%)

*Including Russia

**The ICES advice area and EU management area do not match. Catch advice for area 22-32 corresponds approximately to 3 249 tonnes according to STECF.

***The scientific recommendation on total commercial catch is 114 000 salmon (excluding Russia), which corresponds to 79 000 salmon if unwanted and unreported catch is deducted. If previously discarded fish is included in the 2015 TAC, it corresponds to 89 899 salmon.

Cod (*Gadus morhua*)

Species description

This epibenthic, pelagic species can be found in a wide variety of habitats, from the coast to the deeper areas. It forms aggregations during the day. Cod is an omnivorous species and its diet consists of invertebrates and fish, including its own juveniles. The Baltic cod stocks are divided into the western and eastern stock, separated by the island of Bornholm.

State of the stocks

Cod stocks have been subject to a management plan since 2007². The eastern stock is currently dominated by young and small individuals and very limited in its geographical distribution. The Western stock is suffering from a fishing mortality above sustainable levels and the biomass is hovering just above the safe biological limit. The management plan is under revision and a proposal for a new multi species management plan is expected soon.

Cod in the western Baltic Sea, subdivisions 22-24: The western stock has been recovering slowly since the implementation of the management plan. The spawning stock biomass (SSB) has been hovering around precautionary levels since 2012 and has been mostly below these levels since 2000. It is now estimated to be just above the level for safe biological limits (Blim), but below the lower boundary of MSY SSB (MSY Btrigger). Moreover, fishing mortality (F) is above the target for MSY as well as the target of the management plan. There is currently a high discrepancy between the fishing mortality target in the management plan (0.6) and the estimation of FMSY (0.26). There is also a large variation between

the subdivisions; the stock is considered to be particularly weak in subdivision 22, the Belt Sea, whereas in subdivision 24 there is a high abundance of cod, likely as a result of spillover from the eastern stock. There are indications that subdivision 23, the Sound, constitutes a separate stock. The population in this subdivision is in better shape than in subdivisions 22 and 24, as a result of a trawling ban imposed in 1932. In order to protect the population in area 22, ICES outlines three different options; 1) a temporal and spatial spawning closure between February and April and deeper than 20m ; 2) a separate TAC for area 22; and 3) additional effort restrictions in area 22. This year ICES is not advising according to the management plan as it has not lead to the needed reduction in fishing mortality in order to reach the target set out in the plan. Discards are estimated at 2300 tonnes, which is more than twice as high compared to last year's assessment and approximately 13 % of total catches in weight.

² EC No 1098/2007 establishing a multiannual plan for the cod stocks in the Baltic Sea and the fisheries exploiting those stocks.

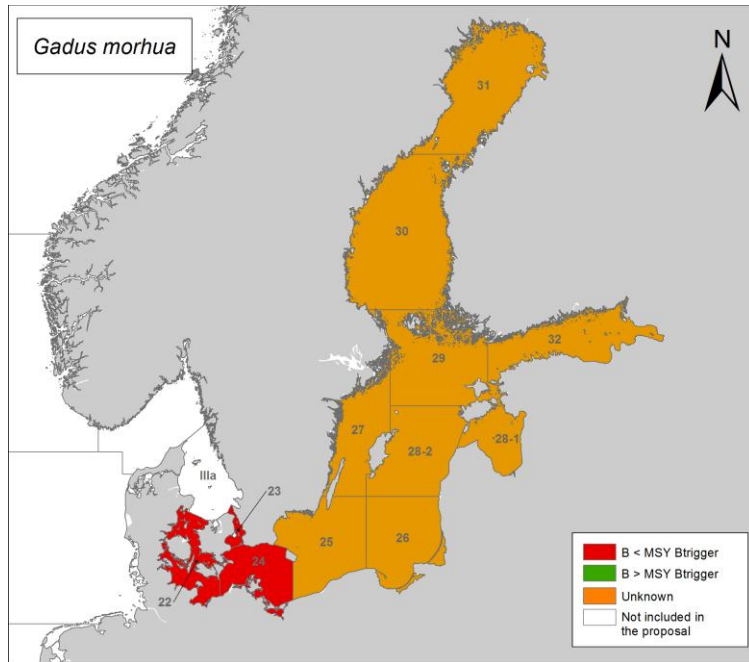


Figure 1. Cod stock status in ICES areas included in the proposal according to spawning stock biomass. NB: cod mainly occurs in subdivisions 22-26 and only scarcely occurs north of these subdivisions.

Recreational catches are estimated at around 13% of total catches and only German data has been included in the assessment. ICES recommends that catches should be no more than 8793 tonnes according to the MSY objective, complemented with additional management measures to protect local spawners in area 22.

Cod in the eastern Baltic Sea, subdivisions 25-32: Since 2007 ICES has annually reported a steady increase in SSB after having been on the brink of collapse for years, attributed to the realisation of the management plan which lead to cautious setting of the TAC.

This year however, ICES reports a dramatic decline in biomass as well as in numbers of larger and older cod, a fact which is confirmed by the industry, as it is currently unable to catch its quota due to very few fish reaching the Minimum Landing Size of 38 cm. ICES deems its analytical assessment as invalid due to inconsistencies and large uncertainties in their data, and therefore gives its advice according to their data-limited approach. The stock is limited to a rather small geographical area, mostly to area 25 and 26. The only successful reproduction is taking place in area 25. Former spawning grounds are not inhabited, likely as a result of the deteriorating environmental conditions of the Baltic Sea. Individual adult cod are reported to be very thin, likely as a result of scarce food availability in area 25 and 26, but could also be attributed to other factors such as overall density-dependent growth, parasites, or reduced availability of benthic invertebrates. ICES advises on the basis of its data-limited approach that catches should be no more than 29 085 tonnes, but also concludes that there are no immediate concerns with the current exploitation rate as the TAC is not fully used. ICES also advise that the catches for sprat and herring should be decreased in the main distribution area for cod.

Oceana recommendations

Considering the poor state of cod in the Baltic Sea, management measures that go beyond the management plan are needed for both stocks.

Cod in the western Baltic Sea, subdivisions 22-24: The TAC should not exceed 8793 tonnes according to the MSY approach. This means diverging from the management plan, a necessary and urgent measure considering the international commitment to achieve MSY in 2015 and the fact that management plan has not been able to achieve its target. It is unfortunate that the Ministers have not chosen to follow the ICES transition towards the MSY approach in previous years, which would have enabled a smoother achievement of the MSY target and easier transition for the fishing industry. As a

result the cut in TAC for 2015 will have to be very drastic. Oceana also recommends that further restrictions be implemented on the catches in subdivision 22, where the stock is particularly weak. Fisheries during the spawning period should therefore be closed in this subdivision at depth greater than 20 meters.

Cod in the eastern Baltic Sea, subdivisions 25-32: Decision makers and managers must ensure that the long term ecosystem health is given the highest priority when managing this stock. The reasons for the poor state of this stock seem to be many, and scientists are currently struggling to come up with answer to why the

stock is composed of mainly small and weak individuals. Although fisheries are clearly just one of many factors that have led to the worrying state of this stock, it is the only man-induced mortality that can be controlled in the short term. Therefore Oceana recommends that the ICES suggested cut in TAC for this stock is followed. This means that the TAC should not exceed 29 085 tonnes. Oceana also recommends that the fishing effort on pelagic species is moved away from area 25 and 26 as the lack of food is mentioned as one of the reasons for the poor state of the stock.

Table 1. Comparative table of cod TACs (in tonnes) in ICES areas registered in the proposal, Council decision for 2013 and 2014, and stock status and Oceana proposal for 2015. Brackets compare TAC difference from previous year (in %).

Fishing area	Name area	TAC 2013	TAC 2014	Stock Status	Oceana proposal 2015
22-24	Western stock	20 000 (-6%)	17 000 (-15%)	Below MSY Btrigger	8 793 (-48%)
25-32	Eastern stock	68 700 (-7%)	70 300 (2%)	Unknown	29 085 (-59%)

Herring (*Clupea harengus*)

Species description

Herring is found throughout the Baltic Sea and constitutes a major part of the ecosystem. The species is distributed from the western Baltic Sea up to the Bothnian Bay. The western herring stock migrates between areas IIIa and IVa in the North Sea and the western part of the Baltic Sea. Herring biomass is dependent on the size of the cod stock, which is its main predator, and on the size of the sprat stock, with which it competes for food. For herring there are large differences in growth rates between regions: individuals are small in the northern areas and larger in the south.

State of the stocks

Herring in division IIIa and subdivisions 22-24: The SSB of this stock is about one third of what it was in the 1990's when the time series began, and has been decreasing since 2006 with the lowest ever level observed in 2011. Since then, it has increased somewhat, just above the precautionary level, and ICES now classifies the stock to be at full reproductive capacity. The exploitation rate is still above Fmsy. The TAC for this stock is decided at two different occasions, first in October with the Baltic TACs (area 22-24) and then together with the North East Atlantic TACs (area IIIa) in December. The ICES advice in order to achieve MSY, means that catches in the whole distribution area should be no more than 43 987 tonnes, for subdivisions 22-24 this means a TAC of 21 994 tonnes.

Herring in central Baltic, excluding Gulf of Riga, subdivision 25-29 and 32: This stock is harvested sustainably according to ICES and is at full reproductive capacity with the SSB above the precautionary level. The SSB has been stable over the past few years. It should be noted however, that the SSB is only about half the size it was in the 1970's when the time series began. As herring is one of the main feed for cod, the abundance of herring in subdivision 25 and 26 is important to the development of the eastern

cod stock. ICES advises, on the basis of the MSY approach, that the maximum TAC in 2015 should be no more than 193 000 tonnes and that fishing effort should be removed from area 25 and 26. As this area is managed excluding the Gulf of Riga, the average catches of this stock in sub division 28.1 must be excluded and the average catches of these herring taken outside the Gulf of Riga in sub division 28.2 should be included in order to provide accurate management advice. This translates into total catches of no more than 185 520 tonnes.

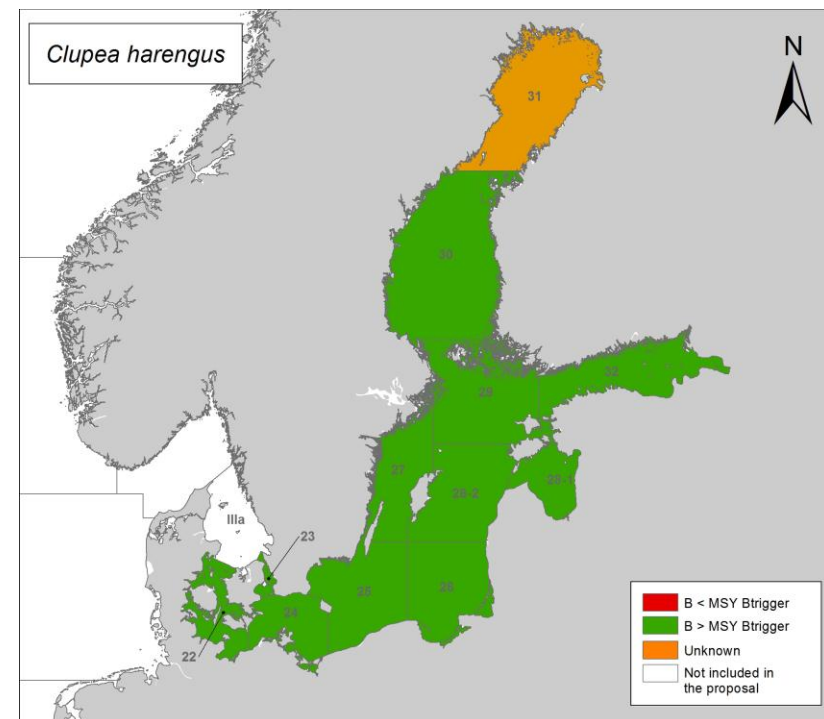


Figure 2. Herring stock status in ICES areas included in the proposal according to spawning stock biomass.

Herring in the Gulf of Riga, subdivision 28.1: This stock is harvested below Fmsy and the SSB has remained above the precautionary level since the 1980's. ICES advises, on the basis of the MSY approach, that the TAC should be a maximum of 34 300 tonnes. The ICES advice refers to the stock and not the management area, which means that the catch advice needs to be adjusted to 38 780 tonnes to match the management area.

Herring in the Bothnian Sea and the Bothnian Bay, subdivisions 30 and 31: The herring stock in subarea 30 has doubled in size since the early 2000 and tripled since the 1980's and is now at a record high level, but the mean weight in body size has declined over the past 20 years. The fishing mortality is low. According to the ICES MSY approach, they suggest that landings be no more than 181 000 tonnes. It should be noted that this stock is managed together with the stock in subarea 31 for which ICES has not performed any analytical assessment and ICES advises, on the basis of their approach for data-limited stocks, that catches be no more than 5534 tonnes, which is an increase compared to last year's advice, as ICES estimates the stock to have increased by more than 20% between 2012 and 2013. The combined management advice for these two stocks translates into 186 534 tonnes.

Oceana recommendations

Considering that herring together with sprat is the major food source for cod, Oceana strongly recommends that multi species considerations be carefully taken when setting the TAC for this species. The density of cod in subdivision 25 is high, but the distribution of high biomasses of sprat and herring are limited to areas outside of the distribution area for cod. Sprat and Herring fisheries in area 25-26 may therefore lead to increased food deprivation for cod.

Like last year, Oceana therefore recommends that all directed fisheries for herring in subdivision 25-26 should be closed and ICES recommendations on total landings should be applied to areas outside of subdivision 25-26. For herring this means that total landings should not exceed 21 994 tonnes in **subdivision 22-24**, 185 520 tonnes in **subdivision 25-29 and 32**, and 38 780 tonnes in **subdivision 28.1**, according to the MSY approach. In subdivision **30 and 31** it is important to bear in mind that the two stocks are in different shape and that the quality of the assessments differs significantly between them. Total landings in these two subareas should not exceed 186 534 tonnes, according to the MSY approach, and catches in the Bothnian Bay should not be increased by more than 20% according to the ICES approach for data-poor stocks. Similar to last year, Oceana further recommends that the two areas be managed separately.

Table 2. Comparative table of herring TACs (in tonnes) in ICES areas registered in the proposal, Council decision for 2013 and 2014, and stock status and Oceana proposal for 2015. Brackets compare TAC difference from previous year (in %).

Fishing area	Name area	TAC 2013	TAC 2014	Stock Status	Oceana proposal 2015
22 - 24	Western Baltic	25 800 (23%)	19 800 (-23%)	Above MSY Btrigger	21 994 (11%)
25-29 and 32	Central Baltic excluding Gulf of Riga	90 000 (15%)	113 000 (25%)	Above MSY Btrigger	185 520* (N/A) No fishing in subdiv 25-26
28.1	Gulf of Riga	30 600 (0%)	30 700 (0%)	Above MSY Btrigger (F>Fmsy)	38 780 (26%)
30-31	Bothnian Sea and Bothnian Bay	106 000 (1%)	138 000 (30%)	Above MSY Btrigger (30), unknown (31)	186 534 (35%)

*Including Russia

Sprat (*Sprattus sprattus balticus*)

Species description

Sprat is found throughout the Baltic Sea and constitutes a major part of the ecosystem. It is distributed from the Western Baltic to the Bothnian Sea. Its biomass is dependent on the stock status of cod, its main predator, and on the size of the herring stock, with which it competes for food.

State of the stocks

Sprat in subdivision 22-32: The fishing mortality for this stock is increasing and the stock is now harvested above MSY and the precautionary level. The SSB declined from a historical high in the late 1990's, but is above the precautionary level and considered to be at full reproductive capacity according to ICES. The development of the sprat stock is highly dependent on the cod stock through predator-prey interactions. As the cod stock is particularly weak in the northern areas (subdivisions 27-32) this is where the sprat stock has increased significantly since the 1990's. ICES recommends that landings should not be higher than 222 000 tonnes, according to the MSY approach. ICES further recommends that a spatial plan be developed with the aim of limiting the fisheries in subdivisions 25-26 where the eastern Baltic cod is distributed.

Oceana recommendations

As with herring, sprat should be considered in a multi species context since it is the major food item for cod. The density of cod in subdivision 25 is high, but as in the case of herring, the distribution of high biomasses of sprat is limited to areas outside the distribution area for cod. Sprat fisheries in area 25-26 may therefore lead to increased food deprivation for cod.

Like last year, Oceana therefore recommends that **all directed sprat fisheries in area 25-26 are closed** and that the ICES

recommendations on total landings be applied to areas outside of subdivision 25-26. For **sprat in subdivision 22-32** the TAC should not exceed 222 000 tonnes, according to the MSY approach.

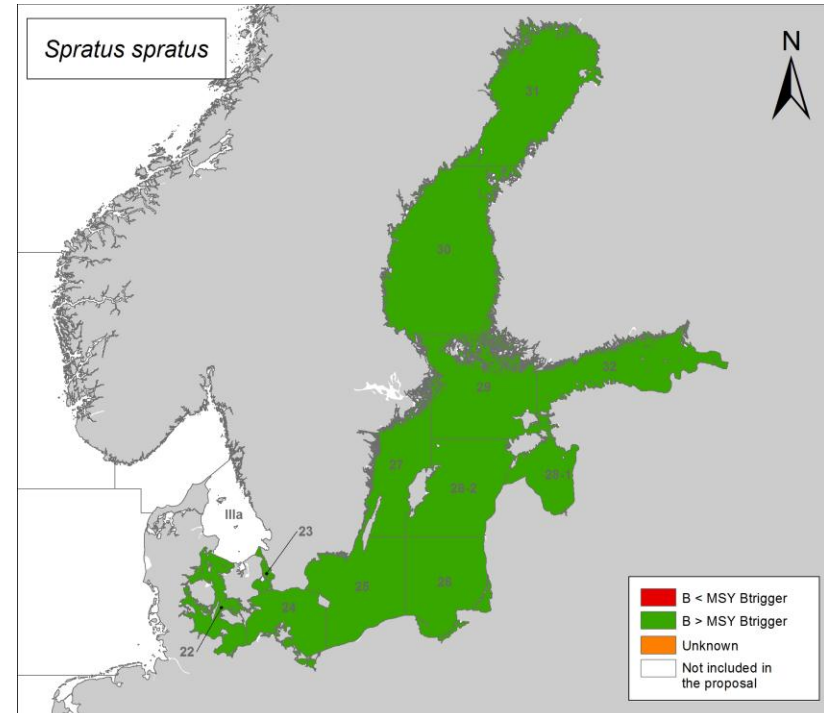


Figure 3. Sprat stock status in ICES areas included in the proposal according to spawning stock biomass.

Table 3. Comparative table of sprat TACs (in tonnes) in ICES areas registered in the proposal, Council decision for 2013 and 2014, and stock status and Oceana proposal for 2015. Brackets compare TAC difference from previous year (in %).

Fishing area	Name area	TAC 2013	TAC 2014	Stock Status	Oceana proposal 2015
22-32	Baltic Sea	250 000 (11%)	240 000 (-4%)	Above MSY Btrigger	222 000* (-10%) No fishing in area 25-26

*including Russia

Plaice (*Pleuronectes platessa*)

Species description

Plaice is distributed from the Belts and Sound in the west, and to the east towards the Gulf of Gdansk, and is sporadically found north, in the Gotland area³. Salinity levels largely determine its distribution. Nursery areas are located in shallow waters, down to a depth of 10 m, and spawning is known to occur in areas with higher salinity, such as the Bornholm and Arkona basins. Stock boundaries are not well understood due to the potentially large connectivity between areas where spawning migration, larval drift and juvenile homing occur, but three separate stocks have been identified.

State of the stocks

The availability of data is scarce, resulting in limited knowledge of the exploitation rates and uncertain stock sizes. As with many other stocks in EU waters, the management areas do not match the stock areas. Last year ICES began to give advice on separate stocks.

Plaice in the Kattegat, Belts and the Sound, subdivisions 21-23:

This is a data limited stock, but ICES estimates that its SSB is increasing and that fishing mortality has been steadily dropping since 2008 and is estimated to be below the Fmsy proxy. ICES estimates that the SSB in the last two years is 129% higher than the average of the three previous years. On the basis of the data-limited approach, ICES recommends that total catches should be no more than 4031 tonnes including discards, which translates into a TAC of maximum 2626 tonnes. The TAC has not been fully utilized in recent years.

³Report of the ICES/HELCOM Workshop on Flatfish in the Baltic Sea (WKFLABA). Available online at: <http://www.ices.dk/sites/pub/Publication%20Reports/Expert%20Group%20Report/acom/2010/WKFLABA/WKFLABA%202010.pdf>

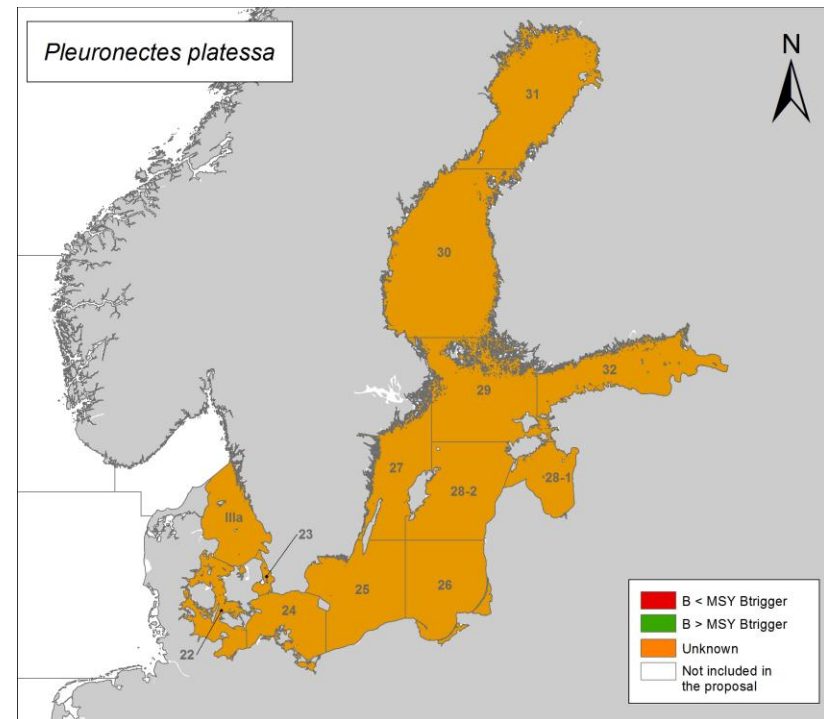


Figure 4. Plaice stock status in ICES areas included in the proposal according to spawning stock biomass.

Plaice in subdivisions 24-32: This stock, just as its neighbor's, is considered by ICES as data-limited. Indicative trends show that the SSB has seen a five-fold increase since the early 2000s, and that fishing mortality is dropping. There are indications that discards are substantial, but lack of sufficient information on the magnitude of this make estimations of total catches difficult. ICES advises on the basis of data-poor stocks that the TAC should be no more than 886 tonnes. The TAC has not been fully utilized during recent years.

Oceana recommendations

Since these are data-poor stocks, Oceana is of the opinion that TAC-setting should follow the precautionary approach, meaning that despite indications that these stocks have seen a strong increase over the latest years, catches should not be increased by more than 20% of the amount from last year, meaning a TAC of 2626 tonnes

for plaice in the **Kattegat, the Belts and the Sound subdivisions 21-23** and 886 tonnes **in the Baltic Sea, subdivision 24-32**. According to the STECF, 90% of the catch in area 21-23 is assumed to be caught in area 22-23. As these stocks are managed together, the Oceana recommendation is that total catches for area 22-32 should not exceed 3 249 tonnes.

Table 4. Comparative table of plaice TACs (in tonnes) in ICES areas registered in the proposal, Council decision for 2013 and 2014, and stock status and Oceana proposal for 2015. Brackets compare TAC difference from previous year.

Fishing area	Name area	TAC 2013	TAC 2014	Stock Status	Oceana proposal 2015
21-23	The Kattegat, the Belts and the Sound	N/A	N/A	Increasing (data poor stock)	2626*
24-32	Baltic Sea	2889 (subdiv 22-32)	3409 (subdiv 22-32)	Increasing (data poor stock)	886*

*The ICES advice area and EU management area do not match. Catch advice for area 22-32 corresponds approximately to 3 249 tonnes.

Salmon (*Salmo salar*)

Species description

Atlantic salmon is an anadromous species. They are born in fresh waters in rivers and migrate to the sea to eventually return to their natal river to reproduce. The juvenile phase is spent in the rivers, usually around one to four years, after which it normally spends one to three years on a feeding migration, mainly feeding on herring and sprat in the sea before returning to its natal river to spawn.

State of the stocks

Salmon reproduce in rivers all over the Baltic Sea catchment area and there are many river specific populations. The majority of rivers are in poor condition leaving just a few productive rivers in the Baltic Sea, with the strongest ones located in the Gulf of Bothnia. Despite the many different river specific populations, salmon is only divided into two different management areas: the Main Basin and the Gulf of Bothnia, Subdivisions 22–31 and the Gulf of Finland, Subdivision 32. Loss of habitat due to river damming and other environmental deterioration, together with overfishing have left salmon populations in poor condition. The populations suffer from very poor post smolt (the first year in the sea) survival, the reason for which is currently unknown. Open sea fisheries take place on mixed populations, making it difficult to protect the weaker populations. Currently there is no management plan in force for salmon, as the former plan adopted by the International Baltic Sea Fishery Commission ceased to exist in 2005, and the current Commission proposal (COM/2011/0470 final), is waiting for adoption by the Council. Note that the TAC for salmon is expressed in number of individuals and not in tonnes.

Salmon in the Baltic, subdivisions 22-31: ICES uses the Potential Smolt Production Capacity (PSPC) to evaluate the current status of wild salmon stocks, meaning the production capacity of smolts calculated for each river on the basis of relevant river-specific

parameters. MSY is estimated at 75% of the PSPC. **Twenty-nine rivers were evaluated by ICES and the MSY target is estimated to have been reached in only two rivers.**

In order to estimate the future status of the stocks, ICES has run five different scenarios on the likelihood of reaching MSY by 2020, based on commercial fishing efforts:

1. 116 000 salmon
2. 20% increase from scenario 1
3. 20% decrease from scenario 1
4. F 0.1 (COM proposal on multi annual plan)
5. No fishing

All the scenarios except scenario 5, gave very similar results. It is clear that even a complete closure of commercial fisheries will not lead to a recovery of weak salmon stocks. As ICES considers that scenario 1 will provide the upper limit of MSY exploitation, ICES recommends that total commercial catches in 2015 do not exceed 116 000 salmon. When estimations of unwanted and unreported catches are excluded, 79 000 salmon remain.

ICES is very clear in its advice that open sea fisheries in mixed populations are particularly problematic for the conservation of weak populations, and therefore recommends that salmon fisheries in the Baltic Sea are managed on a river by river basis.

ICES further states that conservation measures such as habitat restoration and the removal of physical barriers, apart from a reduction in fisheries, are needed in several rivers with weak salmon populations.

Salmon in the Gulf of Finland, subdivision 32: According to ICES, stocks in this area are in very poor condition and the only wild stocks currently found are located in three Estonian rivers. In the rest of the area the stocks consist of a mixture of farmed and wild populations. According to ICES, there should be no fishing of wild populations

and the total commercial catch should be a maximum of 11 800 salmon, leaving 9558 salmon left after unreported and unwanted catches have been subtracted. In order to avoid catches of wild salmon, ICES suggests fisheries be relocated away from rivers and river mouths supporting wild stocks, relocation of fisheries away from sites likely to be on migration paths of wild salmon stocks, and efforts be made to ensure protection of wild salmon from poaching.

Oceana recommendations

The fact that ICES states that even a closure of all commercial fisheries will not ensure sufficient recovery is worrying. Salmon is listed as a species under the Habitat's Directive, inter alia obliging Member States to ensure that its exploitation is compatible with favorable conservation status⁴. The obligations are limited to freshwater environments. However, considering that the species migrate between freshwater and marine environments, the TAC setting will inevitably affect its conservation status. Salmon is one of the fisheries where the landing obligation under the new CFP is expected to come into force in 2015, so the TAC may therefore include previously estimated discarded fish.

Oceana is of the opinion that the total commercial catch in **subdivisions 22-32** should be a maximum of 116 000 salmon including unwanted and unreported catches. When the Russian part of the TAC is excluded, which is 1.9% according to the STECF, 114 000 salmon remain. The actual size of the TAC depends on how the landing obligation, which is planned to come into force in 2015, is implemented. Parts of previously discarded under-sized, or seal damaged -fish may be included in the TAC. If the unreported and misreported as well as discarded catches are assumed to remain the same as last year, it leaves 89 899 salmon left when the unreported and misreported catch is deducted.

⁴ Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora. Annex V.

Considering the alarming state of salmon in the Baltic Sea Oceana urges Ministers to quickly agree on the following actions:

- Fisheries on mixed stocks must be stopped.
- Management measures must urgently be taken to improve habitats and remove migration barriers, as already agreed on in the Baltic Sea Action Plan⁵. Allocated funds for compensatory restocking from hydropower companies for example, should instead be used to improve habitats, as these kind of restocking measures, add little or no improvement, and may even be harmful to the Baltic Sea salmon stocks⁶.

For salmon in the **Gulf of Finland** Oceana recommends that fisheries should be closed until sufficient measures to ensure the complete protection of wild river stocks have been taken.

⁵ 2013 Copenhagen Ministerial declaration, paragraph 19(B) pg 10, available online at: <http://helcom.fi/Ministerial2013/ministerial-declaration>

⁶ See e.g. Anna Palmé et al Compromising Baltic salmon genetic diversity conservation genetic risks associated with compensatory releases of salmon in the Baltic Sea, Havs- och vattenmyndighetens rapport 2012:1. Available online at: <http://www.popgen.su.se/BaltSal/compromising-baltic-salmon-2012-18.pdf>

Table 5. Comparative table of salmon TACs (in number of individuals) in ICES areas registered in the proposal, Council decision for 2012 and 2013, and stock status and Oceana proposal for 2014. Brackets compare TAC difference from previous year (in %).

Fishing area	Name area	TAC 2013	TAC 2014	Stock Status	Oceana proposal 2015
22-31	Baltic Sea	123 000 (-97%)	109 000 (-11%)	N/A	114 000/ 89 899/ 79 000 (N/A)*
32	Gulf of Finland	15 000	15 000	N/A	0 (-100%)

*Total commercial catch is 114 000 salmon (excluding Russia), which corresponds to 79 000 salmon if unwanted and unreported catch is deducted. If previously discarded fish is included in the 2015 TAC it corresponds to 89 899 salmon.

References

COM(2014) 388. Communication from the Commission to the Council on Fishing Opportunities for 2015.

Council Regulation (EC) No 1380/2013. On the Common Fisheries Policy.

Council Directive 2008/56/EC. Marine Strategy Framework Directive.

Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora. Annex V.

EC No 1098/2007 establishing a multiannual plan for the cod stocks in the Baltic Sea and the fisheries exploiting those stocks.

Anna Palmé et al; Compromising Baltic salmon genetic diversity - conservation genetic risks associated with compensatory releases of salmon in the Baltic Sea

Havs- och vattenmyndighetens rapport 2012:1. Available online at: <http://www.popgen.su.se/BaltSal/compromising-baltic-salmon-2012-18.pdf>

Report of the ICES/HELCOM Workshop on Flatfish in the Baltic Sea (WKFLABA). Available online at:

<http://www.ices.dk/sites/pub/Publication%20Reports/Expert%20Group%20Report/acom/2010/WKFLABA/WKFLABA%202010.pdf>

ICES. 2014. Advice 2014. <http://www.ices.dk/community/advisory-process/Pages/Latest-advice.aspx>

Scientific, Technical and Economic Committee for Fisheries (STECF) Review of scientific advice for 2015 -part I Advice on stocks in the Baltic Sea (STECF-14-10).

UN. 2002. World Summit on Sustainable Development (WSSD), Johannesburg, South Africa.

UNCLOS. 1982. United Nations Convention on the Law of the Sea.

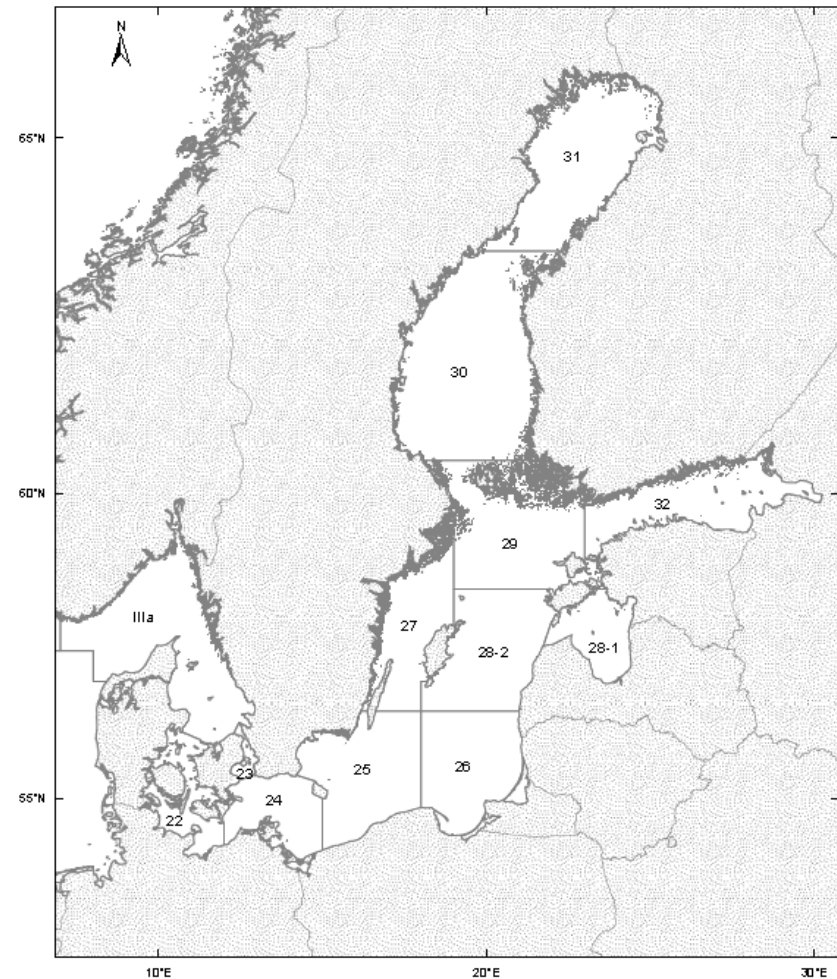
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Description of ICES areas

Subarea	Division	Subdivision	Description
III			Skagerrak, Kattegat, Sound, Belt Sea, and Baltic Sea, the Sound and Belt together known also as the Transition Area
	III a		Skagerrak (West) and Kattegat (East)
	III b,c		Sound and Belt Sea or the Transition Area
		22	Belt Sea
		23	Sound
	III d		Baltic Sea
		24	Baltic West of Bornholm
		25	Southern Central Baltic – West
		26	Southern Central Baltic - East
		27	West of Gotland
		28	East of Gotland or Gulf of Riga
		29	Archipelago Sea
		30	Bothnian Sea
		31	Bothnian Bay
		32	Gulf of Finland





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